



17W 28728

PTO/SB/21 (09-04)

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

## TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission

Application Number	10/501,268
Filing Date	July 9, 2004
First Named Inventor	Guillermo J. Tearney
Art Unit	2877
Examiner Name	To be assigned
Attorney Docket Number	36290/US/2 - 475387-00017

### ENCLOSURES (Check all that apply)

<input checked="" type="checkbox"/> Fee Transmittal Form	<input type="checkbox"/> Drawing(s)	<input type="checkbox"/> After Allowance Communication to TC
<input checked="" type="checkbox"/> Fee Attached	<input type="checkbox"/> Licensing-related Papers	<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences
<input type="checkbox"/> Amendment/Reply	<input type="checkbox"/> Petition	<input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)
<input type="checkbox"/> After Final	<input type="checkbox"/> Petition to Convert to a Provisional Application	<input type="checkbox"/> Proprietary Information
<input type="checkbox"/> Affidavits/declaration(s)	<input type="checkbox"/> Power of Attorney, Revocation	<input type="checkbox"/> Status Letter
<input type="checkbox"/> Extension of Time Request	<input type="checkbox"/> Change of Correspondence Address	<input checked="" type="checkbox"/> Other Enclosure(s) (please identify below):
<input type="checkbox"/> Express Abandonment Request	<input type="checkbox"/> Terminal Disclaimer	PTO-1449 form with references and Return Receipt postcard
<input checked="" type="checkbox"/> Information Disclosure Statement	<input type="checkbox"/> Request for Refund	
<input type="checkbox"/> Certified Copy of Priority Document(s)	<input type="checkbox"/> CD, Number of CD(s) _____	
<input type="checkbox"/> Reply to Missing Parts/Incomplete Application	<input type="checkbox"/> Landscape Table on CD	
<input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53		

Remarks

### SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	Dorsey & Whitney, L.L.P.		
Signature			
Printed name	Gary Abelev, Esq.		
Date	May 16, 2007	Reg. No.	Reg. No. 40,479

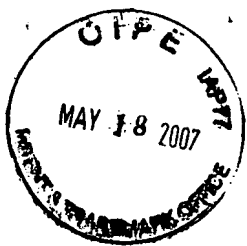
### CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:

Signature			
Typed or printed name	Gary Abelev, Esq.	Date	May 16, 2007

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



036290/US/2 - 475387-00017  
PATENT

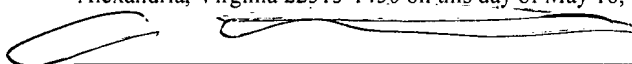
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s) : Guillermo J. Tearney et al.  
Serial No. : 10/501,268  
Filed : July 9, 2004  
Entitled : APPARATUS AND METHOD FOR LOW COHERENCE  
RANGING  
Group Art Unit : 2877  
Examiner : Denise Brown Anderson  
Confirmation No. : 7475

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

I hereby certify that this document is being sent via First Class U. S.  
mail addressed to: Commissioner for Patents, P.O. Box 1450,  
Alexandria, Virginia 22313-1450 on this day of May 16, 2007.

  
(Signature)

Dear Sir:

Pursuant to 37 C.F.R. §§ 1.56 and 1.97(c), applicants bring to the attention of the Examiner the documents listed on the attached Form PTO 1449, and respectfully request that the listed documents be considered by the Examiner and made of record in the above-captioned application. Copies of the United States patent references listed on the Form PTO-1449 are not enclosed, but the foreign and non-patent references are enclosed.

This submission does not represent that a search has been made or that no better art exists and does not constitute an admission that the listed documents are material or constitute "prior art." If the Examiner applies the documents as prior art against any claim in the application and applicant determines that the cited documents do not constitute "prior art" under

United States law, applicants reserve the right to present to the Office the relevant facts and law regarding the appropriate status of the documents.

If the Examiner applies the documents as prior art against any claim in the application and applicants determine that the cited documents do not constitute “prior art” under United States law, applicants reserve the right to present to the Office the relevant facts and law regarding the appropriate status of the documents.

As an Office Action on the merits was recently generated for this case, the requisite fee of \$180.00 pursuant to these sections and 37 C.F.R. § 1.17(p) is enclosed herewith. The Commissioner is hereby further authorized to charge any deficiencies and credit any over payments for the submission of this Information Disclosure Statement to the Dorsey & Whitney’s Deposit Account 50-2054.

Respectfully submitted,

**DORSEY & WHITNEY, LLP**

May 16, 2007



Gary Abelev  
USPTO Reg. No. 40,479  
Attorney for Applicants  
(212) 415-9371



036290/US/2 - 475387-00017  
PATENT

United States law, applicants reserve the right to present to the Office the relevant facts and law regarding the appropriate status of the documents.

If the Examiner applies the documents as prior art against any claim in the application and applicants determine that the cited documents do not constitute "prior art" under United States law, applicants reserve the right to present to the Office the relevant facts and law regarding the appropriate status of the documents.

As an Office Action on the merits was generated for this case, the requisite fee of \$180.00 pursuant to these sections and 37 C.F.R. § 1.17(p) is enclosed herewith. The Commissioner is hereby further authorized to charge any deficiencies and credit any over payments for the submission of this Information Disclosure Statement to the Dorsey & Whitney's Deposit Account 50-2054.

Respectfully submitted,

**DORSEY & WHITNEY, LLP**

Gary Abelev  
USPTO Reg. No. 40,479  
Attorney for Applicants  
(212) 415-9371

May 16, 2007

4849-3861-5809\1

Form PTO-1449 U.S. Department of Commerce  
(REV. 2-82) Patent and Trademark Office

Atty. Docket No.  
036290/US/2 - 475387-  
00017

Serial No.  
10/501,268

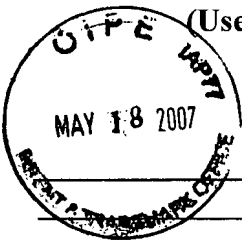
**INFORMATION DISCLOSURE STATEMENT  
BY APPLICANT**

(Use several sheets if necessary)

Applicant(s)  
Guillermo J. Tearney et al.

Filing Date  
July 9, 2004

Group  
2877



**U.S. PATENT DOCUMENTS**

*Exam. Init.		Document No.							Date	Name	Class	Subclass	Filing Date if Appropriate
		6	2	4	9	3	4	9	June 19, 2001	Lauer*****			
	2002	0	0	8	5	2	0	9	July 4, 2002	Mittleman et al. *****			
		7	0	0	6	2	3	1	February 28, 2006	Ostrovsky et al. *****			
		6	1	3	4	0	0	3	October 17, 2000	Tearney et al. *****			

\*\*\*\*\*References cited in Office Action dated December 6, 2006 for U.S. Patent Application No. 10/997,789

\*\*\*\*\*References cited in Office Action dated December 18, 2006 for U.S. Patent Application No. 10/501,276

**FOREIGN PATENT DOCUMENT**

		Document No.							Date	Country	Class	SubClass	Translator Yes No	

**OTHER DOCUMENTS (including Author, Title Date, Pertinent Pages, Etc.)**

			Copy of Office Action dated December 6, 2006 for U.S. Patent Application No. 10/997,789
			Elliott, K. H. "The use of commercial CCD cameras as linear detectors in the physics undergraduate teaching laboratory", European Journal of Physics 19, 1998, pages 107-117 *****
			Lauer, V. "New approach to optical diffraction tomography yielding a vector equation of diffraction tomography and a novel tomographic microscope", Journal of Microscopy Vol. 205, Issue 2, 2002, pages 165-176 *****
			Yu, P. et al. "Imaging of tumor necroses using full-frame optical coherence imaging", Proceedings of SPIE Vol. 4956, 2003, pages 34-41 *****

Examiner

Date Considered

\* Examiner: Initial citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Form PTO-1449 U.S. Department of Commerce  
(REV. 2-82) Patent and Trademark Office

Atty. Docket No.  
036290/US/2 – 475387-  
00017

Serial No.  
10/501,268

**INFORMATION DISCLOSURE STATEMENT  
BY APPLICANT**

(Use several sheets if necessary)

Applicant(s)  
Guillermo J. Tearney et al.

Filing Date  
July 9, 2004

Group  
2877

			Zhao, Y. et al. "Three-dimensional reconstruction of in vivo blood vessels in human skin using phase-resolved optical Doppler tomography", IEEE Journal of Selected Topics in Quantum Electronics 7.6 (2001): 931-935*****
			Copy of Office Action dated December 18, 2006 for U.S. Patent Application No. 10/501,276
			Devesa, Susan S. et al. (1998) "Changing Patterns in the Incidence of Esophageal and Gastric Carcinoma in the United States." <u>American Cancer Society</u> Vol. 83, No. 10 pp. 2049-2053
			Barr, H et al. (2005) "Endoscopic Therapy for Barrett's Oesophagus" <u>Gut</u> Vol. 54:875-884
			Johnston, Mark H.(2005) "Technology Insight: Ablative Techniques for Barrett's Esophagus – Current and Emerging Trends" <u>www.Nature.com/clinicalpractice/gasthep</u>
			Falk, Gary W. et al. (1997) "Surveillance of Patients with Barrett's Esophagus for Dysplasia and Cancer with Ballon Cytology" <u>Gastroenterology</u> Vol. 112, pages 1787-1797
			Sepchler, Stuart Jon. (1997) "Barrett's Esophagus: Should We Brush off this Balloning Problem?" <u>Gastroenterology</u> Vol 112, pages 2138-2152
			Froehly, J. et al. (2003) "Multiplexed 3D Imaging Using Wavelength Encoded Spectral Interferometry: A Proof of Principle" <u>Optics Communications</u> Vol 222, pages 127-136
			Kubba A.K. et al. (1999) "Role of p53 Assessment in Management of Barrett's Esophagus" <u>Digestive Disease and Sciences</u> Vol. 44, No 4. pages 659-667
			Reid, Brian J. (2001) "p53 and Neoplastic Progression in Barrett's Esophagus" <u>The American Journal of Gastroenterology</u> Vol. 96, No 5, pages 1321-1323
			Sharma, P. et al.(2003) "Magnification Chromoendoscopy for the Detection of Intestinal Metaplasia and Dysplasia in Barrett's Oesophagus" <u>Gut</u> Vol. 52, pages 24-27
			Kuipers E.J et al. (2005) "Diagnostic and Therapeutic Endoscopy" <u>Journal of Surgical Oncology</u> Vol. 92, pages 203-209
			Georgakoudi, Irene et al. (2001) "Fluorescence, Reflectance, and Light-Scattering Spectroscopy for Evaluating Dysplasia in Patients with Barrett's Esophagus" <u>Gastroenterology</u> Vol. 120, pages 1620-1629
			Adrain, Alyn L. et al. (1997) "High-Resolution Endoluminal Sonography is a Sensitive Modality for the Identification of Barrett's Meaplasia" <u>Gastrointestinal Endoscopy</u> Vol. 46, No. 2, pages 147-151

Examiner

Date Considered

\* Examiner: Initial citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Form PTO-1449 U.S. Department of Commerce  
(REV. 2-82) Patent and Trademark Office

Atty. Docket No.  
036290/US/2 – 475387-  
00017

Serial No.  
10/501,268

**INFORMATION DISCLOSURE STATEMENT  
BY APPLICANT**  
(Use several sheets if necessary)

Applicant(s)  
Guillermo J. Tearney et al.

Filing Date  
July 9, 2004

Group  
2877

		Canto, Marcia Irene et al (1999) "Vital Staining and Barrett's Esophagus" <u>Gastrointestinal Endoscopy</u> Vol. 49, No. 3, part 2, pages 12-16
		Evans, John A. et al. (2006) "Optical Coherence Tomography to Identify Intramucosal Carcinoma and High-Grade Dysplasia in Barrett's Esophagus" <u>Clinical Gastroenterology and Hepatology</u> Vol. 4, pages 38-3
		Poneros, John M. et al. (2001) "Diagnosis of Specialized Intestinal Metaplasia by Optical Coherence Tomography" <u>Gastroenterology</u> Vol. 120, pages 7-12
		Ho, W. Y. et al. (2005) "115 KHz Tuning Repetition Rate Ultrahigh-Speed Wavelength-Swept Semiconductor Laser" <u>Optics Letters</u> Col. 30, No. 23, pages 3159-3161
		Brown, Stanley B. et al. (2004) "The Present and Future Role of Photodynamic Therapy in Cancer Treatment" <u>The Lancet Oncology</u> Vol. 5, pages 497-508
		Boogert, Jolanda Van Den et al. (1999) "Endoscopic Ablation Therapy for Barrett's Esophagus with High-Grade Dysplasia: A Review" <u>The American Journal of Gastroenterology</u> Vol. 94, No. 5, pages 1153-1160
		Sampliner, Richard E. et al. (1996) "Reversal of Barrett's Esophagus with Acid Suppression and Multipolar Electrocoagulation: Preliminary Results" <u>Gastrointestinal Endoscopy</u> Vol. 44, No. 5, pages 532-535
		Sampliner, Richard E. (2004) "Endoscopic Ablative Therapy for Barrett's Esophagus: Current Status" <u>Gastrointestinal Endoscopy</u> Vol. 59, No. 1, pages 66-69
		Soetikno, Roy M. et al. (2003) "Endoscopic Mucosal resection" <u>Gastrointestinal Endoscopy</u> Vol. 57, No. 4, pages 567-579
		Ganz, Robert A. et al. (2004) "Complete Ablation of Esophageal Epithelium with a Balloon-based Bipolar Electrode: A Phased Evaluation in the Porcine and in the Human Esophagus" <u>Gastrointestinal Endoscopy</u> Vol. 60, No. 6, pages 1002-1010
		Pfefer, Jorje et al. (2006) "Performance of the Aer-O-Scope, A Pneumatic, Self Propelling, Self Navigating Colonoscope in Animal Experiments" <u>Gastrointestinal Endoscopy</u> Vol. 63, No. 5, pages AB223
		Overholt, Bergein F. et al. (1999) "Photodynamic Therapy for Barrett's Esophagus: Follow-Up in 100 Patients" <u>Gastrointestinal Endoscopy</u> Vol. 49, No. 1, pages 1-7
		Vogel, Alfred et al. (2003) "Mechanisms of Pulsed Laser Ablation of Biological Tissues" <u>American Chemical Society</u> Vol. 103, pages 577-644

Examiner

Date Considered

\* Examiner: Initial citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Form PTO-1449 U.S. Department of Commerce  
(REV. 2-82) Patent and Trademark Office

Atty. Docket No.  
036290/US/2 – 475387-  
00017

Serial No.  
10/501,268

**INFORMATION DISCLOSURE STATEMENT  
BY APPLICANT**  
(Use several sheets if necessary)

Applicant(s)  
Guillermo J. Tearney et al.

Filing Date  
July 9, 2004

Group  
2877

		McKenzie, A. L. (1990) "Physics of Thermal Processes in Laser-Tissue Interaction" <u>Phys. Med. Biol</u> Vol. 35, No. 9, pages 1175-1209
		Anderson, R. Rox et al. (1983) "Selective Photothermolysis" Precise Microsurgery by Selective Absorption of Pulsed Radiation" <u>Science</u> Vol. 220, No 4596, pages 524-527
		Jacques, Steven L. (1993) "Role of Tissue Optics and Pulse Duration on Tissue Effects During High-Power Laser Irradiation" <u>Applied Optics</u> Vol. 32, No. 13, pages 2447-2454
		Nahen, Kester et al. (1999) "Investigations on Acosustic On-Line Monitoring of IR Laser Ablation of burned Skin" <u>Lasers in Surgery and Medicine</u> Vol. 25, pages 69-78
		Jerath, Maya R. et al. (1993) "Calibrated Real-Time Control of Lesion Size Based on Reflectance Images" <u>Applied Optics</u> Vol. 32, No. 7, pages 1200-1209
		Jerath, Maya R. et al (1992) "Dynamic Optical Property Changes: Implications for Reflectance Feedback Control of Photocoagulation" <u>Journal of Photochemical, Photobiology. B: Biol</u> Vol. 16, pages 113-126
		Deckelbaum, Lawrence I. (1994) "Coronary Laser Angioplasty" <u>Lasers in Surgery and Medicine</u> Vol. 14, pages 101-110
		Kim, B.M. et al. (1998) "Optical Feedback Signal for Ultrashort Laser Pulse Ablation of Tissue" <u>Applied Surface Science</u> Vol. 127-129, pages 857-862
		Brinkman, Ralf et al. (1996) "Analysis of Cavitation Dynamics During Pulsed Laser Tissue Ablation by Optical On-Line Monitoring" <u>IEEE Journal of Selected Topics in Quantum Electronics</u> Vol. 2, No. 4, pages 826-835
		Whelan, W.M. et al. (2005) "A novel Strategy for Monitoring Laser Thermal Therapy Based on Changes in Optothermal Properties of Heated Tissues" <u>International Journal of Thermophysics</u> Vol. 26., No 1, pages 233-241
		Thomsen, Sharon et al. (1990) "Microscopic Correlates of Macroscopic Optical Property Changes During Thermal Coagulation of Myocardium" <u>SPIE</u> Vol. 1202, pages 2-11
		Khan, Misban Huzaira et al. (2005) "Intradermally Focused Infrared Laser Pulses: Thermal Effects at Defined Tissue Depths" <u>Lasers in Surgery and Medicine</u> Vol. 36, pages 270-280
		Neumann, R.A. et al. (1991) "Enzyme Histochemical Analysis of Cell Viability After Argon Laser-Induced Coagulation Necrosis of the Skin" <u>Journal of the American Academy of Dermatology</u> Vol. 25, No. 6, pages 991-998

Examiner

Date Considered

\* Examiner: Initial citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



Form PTO-1449 U.S. Department of Commerce  
(REV. 2-82) Patent and Trademark Office

Atty. Docket No.  
036290/US/2 – 475387-  
00017

Serial No.  
10/501,268

**INFORMATION DISCLOSURE STATEMENT  
BY APPLICANT**

(Use several sheets if necessary)

Applicant(s)  
Guillermo J. Tearney et al.

Filing Date  
July 9, 2004

Group  
2877

		Nadkarni, Seemantini K. et al (2005) "Charaterization of Atherosclerotic Plaques by Laser Speckle Imaging" <u>Circulation</u> Vol. 112, pages 885-892
		Zimnyakov, Dmitry A. et al (2002) "Speckle-Contrast Monitoring of Tissue Thermal Modification" <u>Applied Optics</u> Vol. 41, No. 28, pages 5989-5996
		Morelli, J.G., et al (1986) "Tunable Dye Laser (577 nm) Treatment of Port Wine Stains" <u>Lasers in Surgery and Medicine</u> Vol. 6, pages 94-99
		French, P.M.W. et al. (1993) "Continuous-wave Mode-Locked Cr <sup>4+</sup> : YAG Laser" <u>Optics Letters</u> Vol. 18, No. 1, pages 39-41
		Sennaroglu, Alphan at al. (1995) "Efficient Continuous-Wave Chromium-Doped YAG Laser" <u>Journal of Optical Society of America</u> Vol. 12, No. 5, pages 930-937
		Bouma, B et al. (1994) "Hybrid Mode Locking of a Flash-Lamp-Pumped Ti: Al <sub>2</sub> O <sub>3</sub> Laser" <u>Optics Letters</u> Vol. 19, No. 22, pages 1858-1860
		Bouma, B et al. (1995) "High Resolution Optical Coherence Tomography Imaging Using a Mode-Locked Ti: Al <sub>2</sub> O <sub>3</sub> Laser Source" <u>Optics Letters</u> Vol. 20, No. 13, pages 1486-1488
		Fernández, Cabrera Delia et al. "Automated detection of retinal layer structures on optical coherence tomography images", <u>Optics Express</u> Vol. 13, No. 25, October 4, 2005, pages 10200-10216
		Ishikawa, Hiroshi et al. "Macular Segmentation with optical coherence tomography", <u>Investigative Ophthalmology &amp; Visual Science</u> , Vol. 46, No. 6, June 2005, pages 2012-2017

4836-7203-7121\1

Examiner

Date Considered

\* Examiner: Initial citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.